

Claims

1. A safe lancet disposer, comprising:

5 a cutting unit, comprising: an insertion plate having therein an insertion hole into which an end of a needle of a lancet used for blood collection is inserted; a support plate disposed under the insertion plate, with a guide groove formed in an upper surface of the support plate and extending from a first end of the support plate towards a second end, an elongated guide hole formed in the guide groove and communicating with the insertion hole, and a guide slot extending from the second end of the support plate to an intermediate position along the guide groove; and a cutting plate movably disposed in both the guide groove and the guide slot, with a cutting hole formed in the cutting plate and communicating with both the insertion hole and the elongated guide hole so as to cut the end of the needle inserted into the cutting hole through the insertion hole, a stop protrusion integrally provided under the cutting plate and extending towards the guide slot, and
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20 a mounting hole formed through the cutting plate;

a receiving unit, comprising: a receiving housing perpendicularly disposed under the support plate, with a receiving hole longitudinally formed through the receiving housing and communicating with the elongated guide hole; and a receiving container removably inserted into the
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receiving hole so that the cut end of the needle which drops through the elongated guide hole is contained in the receiving container; and

an operating unit, comprising: an operating lever
5 rotatably mounted to a second surface of the receiving housing such that an upper end of the operating lever is coupled to the cutting plate through the guide slot, thus moving the cutting plate so as to cut the end of the needle inserted into the cutting hole.

10 2. The safe lancet disposer according to claim 1, wherein the receiving housing is coupled to the support plate and the insertion plate by a locking bolt, which is tightened to the receiving housing after passing through the support plate from an upper surface of the insertion
15 plate, a lower surface of the receiving housing is defined by a stopper which openably closes the receiving hole, and the receiving housing comprises: a first hinge protrusion, provided on the second surface of the receiving housing at a position adjacent to an upper end of the receiving
20 housing; a first spring seat, formed in the second surface of the receiving housing below the first hinge protrusion so that a first end of a lever spring is inserted into the first spring seat; and a first knurled surface, formed at a lower position on the second surface of the receiving
25 housing.

3. The safe lancet disposer according to claim 1 or 2, wherein the operating lever comprises: a first lever body extending downwards from a position level with the upper end of the second surface of the receiving housing; a
5 second lever body extending from a lower end of the first lever body outwards and downwards at a predetermined angle with respect to the second surface of the receiving housing; a third lever body extending downwards from a lower end of the second lever body; an operating protrusion
10 provided on an upper surface of the first lever body and inserted into the mounting hole formed in the stop protrusion; second hinge protrusions provided on a first surface of the first lever body so that the second hinge protrusions are rotatably mounted to the first hinge
15 protrusion via a hinge while being in close contact with opposite sides of the first hinge protrusion; a second spring seat formed in the first lever body below the second hinge protrusions so that a second end of the lever spring, which extends from the first spring seat to an outside, is
20 inserted into the second spring seat; and a second knurled surface formed on a lower end of the third lever body at a position facing the first knurled surface.

4. The safe lancet disposer according to claim 1, wherein the insertion plate comprises an insertion groove

provided in an upper surface of the insertion plate so that an end of the lancet comes into close contact with a bottom of the insertion groove, the insertion hole is formed downwards in the insertion groove, and the guide slot
5 divides the second end of the support plate into two opposite parts and defines a stop surface on an extension part of the guide groove so that the stop surface contacts a surface of the stop protrusion.

5. The safe lancet disposer according to claim 1,
10 further comprising: an internal thread formed on a lower end of an inner surface of the receiving hole; and an external thread formed on a circumferential outer surface of the stopper so that the external thread corresponds to and engages with the internal thread.

15 6. The safe lancet disposer according to claim 1, wherein the receiving container has a cylindrical shape, which is open at an upper end thereof and closed at a lower end thereof, and the receiving container comprises: an integral lid holding ring extending downwards from the
20 lower end of the receiving container; and a lid held by the lid holding ring so that, when the receiving container is full of cut ends of needles and is to be discarded, the opened upper end of the receiving container is closed using the lid.

7. The safe lancet disposer according to claim 6,
further comprising:

a magnet provided in the lower end of the receiving
container so that the cut ends of the needles are held by
5 the magnet in the receiving container.

8. The safe lancet disposer according to claim 1,
wherein the insertion hole decreases in diameter from an
upper end of the insertion groove towards a lower end of
the insertion groove, and the cutting hole increases in
10 diameter from a top of the guide groove towards a lower end
of the support plate.